REMARKS/ARGUMENTS

Claims 1-12 and 14-23 were pending in the instant application. The specification is objected for lacking a brief and detailed explanation of the drawings. Claims 1-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 5,855,868 to Fahlvik in view of United States Patent No. 5,055,288 to Lewis et al. Claims 1-23 now stand canceled. New claims 24-33 have been added. Applicant respectfully submits that none of the amendments constitute new matter in contravention of 35 U.S.C. §132. Reconsideration is respectfully requested.

The specification stands objected to for lacking a brief and detailed description of the drawings. The objection is respectfully traversed.

Sections 601 and 608.01(a) of the MPEP provide a "preferred" layout for the specification, however, such a layout is not mandatory. Applicant respectfully submits that, as such, the application as presented is acceptable under United States patent practice. Additionally, Applicant respectfully directs the Examiner to the text of the present application (specifically as published as PCT/GB00/01960) bridging pages 15 and 16 where the Figures are sufficiently described. As the application layout demanded by the Examiner is only a preferred, but not a required, layout, and as the drawings are fully described within the specification, Applicants respectfully submit that the specification is acceptable. Reconsideration and withdrawal of the objection are respectfully requested.

Claims 1-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 5,855,868 to Fahlvik in view of United States Patent No. 5,055,288 to Lewis et al. This rejection is respectfully traversed.

The present invention claims a method where a bolus of contrast agent is administered to, for instance, a patient and images of the patient's kidney are generated during the first pass of the bolus. Imaging following the first pass allows for perfusion information and quantification (e.g. in units of ml blood/min) as a dynamic process. The first pass of the contrast agent bolus, i.e. the transient effect of the contrast agent, is monitored. The present invention thus initially provides a type of strong but transient signal enhancement. As time passes by, the signal enhancement drops while the contrast agent distributes more uniformly in the blood. There is still signal enhancement from the contrast agent, just not as prominent as it was after the first pass bolus. This more-uniform distribution of the contrast agent – or the steady-state phase – is the second time point where images are generated. These images provide morphological information. As described on page 9 of the application, both sets of images may be superimposed as to permit a doctor to view directly correlation between a stenosis and a hyperperfused or non-perfused area in the kidney.

Fahlvik (US 5,855,868) discloses a blood pool MR contrast agent as used in the present application (an iron oxide agent). The Examiner notes that Fahlvik does not specifically recite generation of images during the first pass of the contrast agent. Applicants

concur and respectfully submit that this is because Fahlvik is directed to MR angiography using its contrast agents in such a way that it is taken up by RES organs, e.g. the liver.

These types of agents accumulate in the RES organs, e.g. the liver but not in the kidney. This process takes a certain amount of time, about 40 min to 1 hour (see col. 2, lines 50-48) and would therefore not be finished after a first pass of a bolus of the agent through the liver. Furthermore, images in the Fahlvik method must be taken at a point of time when there is still agent in the blood. Fahlvik requires this time window so that a low concentration of the agent will give a positive effect (bright/enhanced image) of the blood vessels in a T1 weighted image while the high concentration of the agent in the RES organs/liver will make the organ appear as a dark spot on a T1 weighted image (see also col. 3, lines 12-16). This effect is illustrated Fahlvik's post contrast pictures Fig. 1B and 2B: the vessels are bright, the liver is dark. The Fahlvik method is thus about enhancing contrast difference between a RES organ and the surrounding blood vessels and a steady-state situation is imaged only. Hence, Fahlvik is actually teaching away from the present invention as generating first pass images of the agent in the method of Fahlvik would not make sense – one would see high enhancement of the blood but would not have the dark RES organ.

Lewis (US 5 055 288) discloses similar blood pool MR agents and also their use in kidney imaging. But while Lewis discloses the imaging of tissue perfusion this is not done specifically in the context with kidney imaging. Furthermore, Lewis fails to disclose, teach, or suggest any technical details about how this perfusion imaging may be carried out to get information which is wanted. Moreover, Lewis fails to disclose, teach, or suggest image

generation of a first pass of contrast agent. In col. 5, line 57-60 a different method is indicated (wash in [of the contrast agent] to damaged tissue and images are taken soon thereafter) however this is not mentioned in the context of kidney imaging and also the step of generating a second set of images in the steady-state phase which we now have in claim 1 is not disclosed.

Applicant respectfully submits that as Fahlvik teaches away from, and has no benefit from, first pass imaging of a bolus, it is improper to combine it with a reference providing earlier imaging so as to read on the present invention as such would contradict the teachings of Fahlvik.

Additionally, it has long been noted that

> **"[o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination. Under section 103, teachings of references can be combined *only* if there is some suggestion or incentive to do so."** ACS Hosp. Sys. Inc. v. Montefiore Hosp., 221 USPQ 929 (Fed. Cir. 1984).

Fahlvik only teaches imaging during the time window when the contrast agent is both in the blood vessel and the RES organ. And there is no teaching in Lewis which would motivate a skilled person to 1) use the method disclosed by Fahlvik for kidney imaging and 2) further modify that method by generating images of the first pass of the contrast agent in a first step of the method before generating images of the steady-state situation. In fact, as neither reference discloses first pass imaging, the combined teachings of Lewis and Fahlvik therefore do not include all the limitations of the present invention. Thus, even assuming,

arguendo, that the references are properly combinable, Applicant respectfully submits that neither reference would cure the deficiencies of the other.

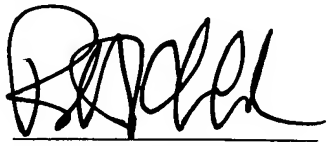
Therefore, as neither Fahlvik nor Lewis, either alone or in combination, disclose, teach, or suggest the present invention, Applicant respectfully submits that the present invention is patentably distinct thereover. Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the amendments and remarks hereinabove, Applicant respectfully submits that the present application, including claims 24-33, is in condition for allowance. Favorable action thereon is respectfully requested.

The Office is authorized to charge any additional fees incurred by the entry of this Amendment to the instant assignee's Deposit Account No. 502-665.

Any questions with respect to the foregoing may be directed to Applicant's undersigned counsel at the telephone number below.

Respectfully submitted,



Robert Chisholm
Reg. No. 39,939

Amersham Health, Inc.
101 Carnegie Center
Princeton, NJ 08540
Phone (609) 514-6418
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